

ABSTRACT

A diagnostic catheter with a steering device to direct the distal end of the catheter while it is inserted in a vessel. The catheter may include either a bi-directional steering mechanism, or a unidirectional steering mechanism. Pre-formed catheters with no steering means are also provided. The catheter bodies include a plurality of ring electrodes used for sensing the intracardial electrogram signal during operation of the catheter. The ring electrodes are placed in ohmic contact with their corresponding signal wires by a solderless connection. In addition, the catheter may be embodied as a basket catheter including a plurality of splines. After the catheter is inserted into the vessel or organ to be examined (typically the heart), the splines may be expanded from an at-rest position to form the basket. A central retractable and steerable member is included to provide the expansion force. The expansion force can also be provided by moving the proximal portion of the catheter relative to the central member. Each of the splines forming the basket includes a length of spring wire disposed therein to provide conformal forces causing the splines to conform to the surfaces being inspected.